

## ABSTRACT

After forming domain inverted layers 3 in an LiTaO<sub>3</sub> substrate 1, an optical waveguide is formed. By performing low-temperature annealing for the optical wavelength conversion element thus formed, a stable proton exchange layer 8 is formed, where an increase in refractive index generated during high-temperature annealing is lowered, thereby providing a stable optical wavelength conversion element. Thus, the phase-matched wavelength becomes constant, and variation in harmonic wave output is eliminated. Consequently, with respect to an optical wavelength conversion element utilizing a non-linear optical effect, a highly reliable element is provided.

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